Evolution of livelihood strategy and income of the households in the coastal sandy area of the Central region, Vietnam – the case of Thua Thien Hue Province during period 2003-2008

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Abstract: Based on livelihood approach and using both livelihood strategy participatory assessment and household survey data this study mainly focus on assessment of evolution of livelihood strategy and income of households in the Coastal Sandy Zone of Thua Thien Hue Province. Findings indicated that livelihood strategies are very dynamic and considerable difference between the wealth categories of households and among the study sites. Although agriculture –based strategy is one of the most popular among the livelihood strategies there are considerable changes. Thanks to more specialization on livestock - non-farm business – aquaculture the better-off category has increased rapidly their income during 2003-2008 period. By contrast, due to more dependence on food crop, wage work and migration, income of the poor slowly improved at the same period. These findings implicate that in the context of rural development, support policies introduced by government have positively influenced on household income, but these general policies cannot meet the development needs from various locations as well as different household categories because there is marked difference in livelihood assets, human source, landholding, financial and social capitals in particular.

Key words: household, livelihood, strategy, income

Introduction

Located in the East of Thua Thien Hue Province, the Coastal Sandy Zone[1] plays an important role in socio-economic development. This zone represents only 18.2 % of the total provincial area, but it is home land of about 45 % of the total provincial population and most of them mainly depends on agriculture, fishery and aquaculture for their livelihood. Thanks to innovation policy introduced by Vietnamese Government, in the last ten years the economy's performance has been impressive with growth of almost 10 % per annum[2]. At the same period, agricultural growth has been sustained at approximately 9 % per year.

In order to response to the new market forces, in the last ten years there is dynamic change in agricultural sector. It's structure sector has changed with increasing focus on aquaculture and livestock production. Agricultural diversification and intensification as well as the formation of agro-business are known as among common households' strategies. As a result, the living standard of rural people has significantly improved.

In spite of the dynamic change in the livelihood strategy of the households in the region, there are many challenges because this region is well-known by high vulnerability to natural hazards, poorly endowed resources, poor condition of infrastructure, land degradation, environmental pollution. Consequently, in the region there are relatively high incidences of poverty, low income and lack of employment, unsustainable resource use.

This study focuses on the evolution of livelihood strategy of the households in the Coastal Sandy Zone of Thua Thien Hue Province. This study aims at assessing the changes in livelihood strategies of rural households in the coastal sandy zone of Thua Thien Hue Province. More specifically, the study addresses the following questions:

1. What are the main typologies of livelihood strategy and changes in livelihood strategy of the household catergories in the recent years?
2. How do livelihood strategies influence income of the household categories?

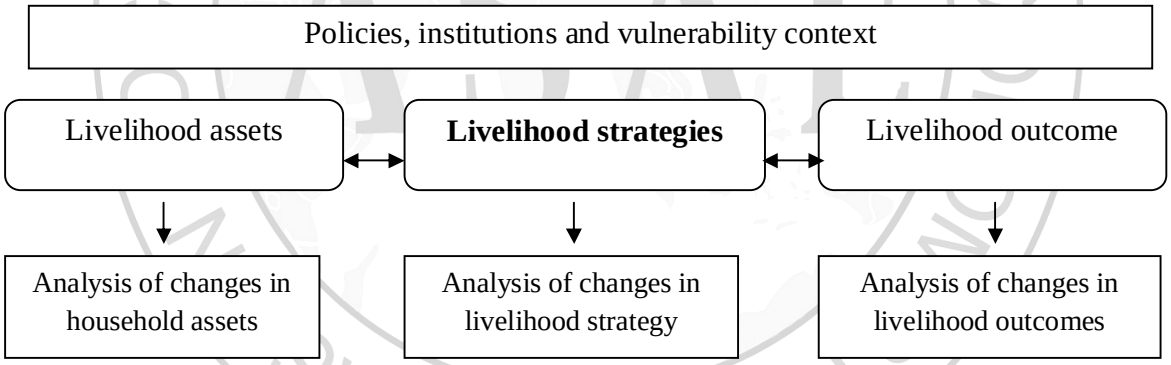
1. Methodology

[1] This zone located in the five districts, namely Phong Dien, Quang Dien, Huong Tra, Phu Vang and Phu Loc

[2] Annual GDP growth over 2001-2005 period was 12.94 % in Phu Loc, 11.7 % in Phu Vang.

2.1 Livelihood approach

In this study, livelihood approach is considered as the suitable method. A livelihood is composed of the capabilities, assets (including both material and social resources) and activities required for a means of living. A livelihood is sustainable when it can cope with and recover from stresses and shocks and maintain or enhance its capabilities and assets both now and in the future, while not undermining the natural resource base (Carney, 1998; Ashley and Carney,1999; Chambers and Conway, 1992). Based on this definition, livelihood framework includes three main components, namely livelihood assets, strategy (activity) and outcome which interact each other and are under influenced by the mediating environment (Scoones, 1998; Ellis, 2000) (Figure 1). Livelihood strategies are composed of activities that generate the means of household survival (Ellis, 1998). In other words, livelihood strategies refers to the possible combination of activities and choices that people make/undertake in order to utilize their existing capital assets to achieve their livelihood goals (including productive activities, investment strategies, reproductive choices, etc.).



(Source: Adapted from Scoones, 1998 and DFID 2000)

Figure 1. Framework for analyzing livelihood strategy

As an intrinsic part of the assets-activities-outcomes cycle, the livelihood strategy is considered as a process in which households combine activities to meet their various needs at different times. They are the patterns of behavior adopted by the household as a result of the mediation processes on the household assets. Livelihood strategies which translated a set of assets into a portfolio of income earning activities are dynamic and generally adaptive over time, responding to both opportunities and changing constraints created by mediating processes (Scoones, 1998; Ellis, 2000; Davies, 1996; Carney, 1998). Apart from 'internal influence', it is influenced by the

'external' mediating environment within decision-making processes of the livelihood strategy is taken. In the rural context, the livelihood activities are very diverse. They include on-farm activities as reflected by the range of crop, livestock and other natural resource based activities undertaken, off-farm and non-farm activities (Ellis, 2000). Due to the difference in the household livelihood assets and strategy, the household select a complex portfolio of livelihood activities. Generally, the livelihood strategies are very flexible to respond to changes in the livelihood environment. They may include diversification, intensification/extensification, migration (Ellis, 2000; Scoones, 1998; Hussein and Nelson, 1998; Carswell, 1997). These livelihood strategies are also defined as survival, coping, adaptive and accumulative ones (Dercon and Krishnan, 1996; Davies, 1996).

Based on livelihood participatory assessment, in this study the household livelihood strategies are classified and assessed according the household income and income composition (e.g. shares of income earned in different sectors of the household economy). The typology of the livelihood strategy is defined as follows:-

Agriculture-based strategy: households whose income from agriculture accounts more than 50 % of the total income. There are two sub-strategies :-.

- Mainly crop – based sub-strategy: households who strongly rely on crop production, the share of crop income represents more than 50 % of the total household income.
- Mainly livestock – based sub-strategy: households who strongly rely on livestock production, the share of livestock income represents more than 50 % of the total household income.

Agriculture-nonfarm based strategy: households associated with a share of agriculture and non-farm income accounting for more than 50 % of their total income.

Agriculture-wage-remittance based strategy: households who receive over 50 % of their income from agriculture, wage and remittance income.

Aquaculture-based strategy: households associated with a share of aquaculture income accounting for more than 50 % of the total income.

Mixed-based strategy: households who do not belong to any of the identified strategy described above (e.g. a share of the identified strategies above is less than 50 % of their total income.

2.2 Data sources

Data sources from focus groups, participatory assessment

In the frame of the research, the different activities such as focus groups, workshop, open - ended interviews and other participatory activities are held at the different levels to collect information related to livelihood and livelihood strategy of the households in the coastal sandy zone. The range of collected information includes:

- ✓ Determining the current status of agro-forestry, aquaculture and the business development situation in the concerned location.
- ✓ Determining the current majority of livelihood activities and livelihood strategies of household groups in the commune and village, the changes in livelihood activities and livelihood strategies in the recent years, main reasons for these changes, capability of adapting and coping with opportunities and challenges.
- ✓ Assessing the policies, the institutions and the organizations that influence the household livelihood in the concerned location.
- ✓ Identifying pros and cons in the current livelihood strategies, problems and solutions for next future.

Household survey data

Primary data is collected from two rounds of household survey conducted by PIC project[3]. in 2004 and 2007-2008. By random sampling method, 146 households from 7 villages[4] were chosen in 2004 and 138 of them were re-interviewed in 2007-2008. These households are

[3] a joint research project by Hue University of Agriculture and Forestry, National Institute for Soils and Fertilizers, Université Catholique de Louvain, Faculté Universitaire des Sciences Agronomiques de Gembloux

[4] Seven villages of the Coastal Sandy Zone are chosen, namely (1) Duc Phu village in Phong Hoa commune, Phong Dien District; (2) Dong Cao village in Quang Thai commune, (3) Thuy Lap village in Quang Loi commune, Quang Dien District; (4) Xuan Thien Thuong village in Vinh Xuan commune, (5) Vinh Luu village in Phu Luong commune, (6) Nghia Lap village in Vinh Phu commune, Phu Vang District; (7) Phung Chanh village in Vinh Hung commune, Phu Loc District. Statistically, these villages are equally distributed and they are representatives for socio-economic conditions of the Coastal Sandy Zone of Thua Thien Hue Province.

divided into three categories of households, namely poor, average and better-off households. This household classification is based on criteria created by participatory method such as land size, family size, productive assets, housing, livestock, education level, income.

2. Results and discussion

3.1 Livelihood strategy

Different livelihood strategy among the three wealth categories of households

The findings explored by the participatory livelihood strategy assessment are confirmed by the information collected from the households survey. Figure 1 indicates that over the period 2003-2008, the share of households associated with agriculture – based strategy has gradually reduced. Nevertheless, this strategy is still the most popular opted livelihood strategy in the Coastal Sandy Zone. In 2007-2008, about 60 % of the surveyed households opted the agriculture - based livelihood strategy (Table 1 in appendix). It implies that most households in the study sites strongly rely on agriculture for their livelihood. Breaking down into the two specific sub-strategies, as may be expected, the better-off household category is associated with a higher degree of reliance on livestock. It is not surprising that the livestock-based livelihood strategy allows the better-off household category to get higher income since there are relatively favorable conditions for the meat and poultry market as the living standard of consumers has steadily increased in the recent years. Statistically, the increase rate of the prices of livestock products is recorded as the annually highest; for example, on average, beef and pork price has annually increased about 25 % in recent years. By contrast, the poor households category is relying more on the crop production. The result seems to be explained that the poor households are those who have less productive resources such as land, capital, and have a relatively low capacity. Therefore, the poor households give the highest priority to food security through the utilization of their limited resources. It implies that in comparison with livestock, crops would seem to play more important role. This finding is not only valid for the poor but also for the average and the better-off household categories.

The percentage of surveyed households who apply other livelihood strategies varies among the three wealth categories. The better-off households are more likely associated with agriculture and-non-farm - based and aquaculture - based strategies. Besides agriculture, non-farm activities

are increasingly important to the better-off households. By contrast, the poor household are likely to fall into the agriculture-wage-remittance - based and mixed - based strategies.

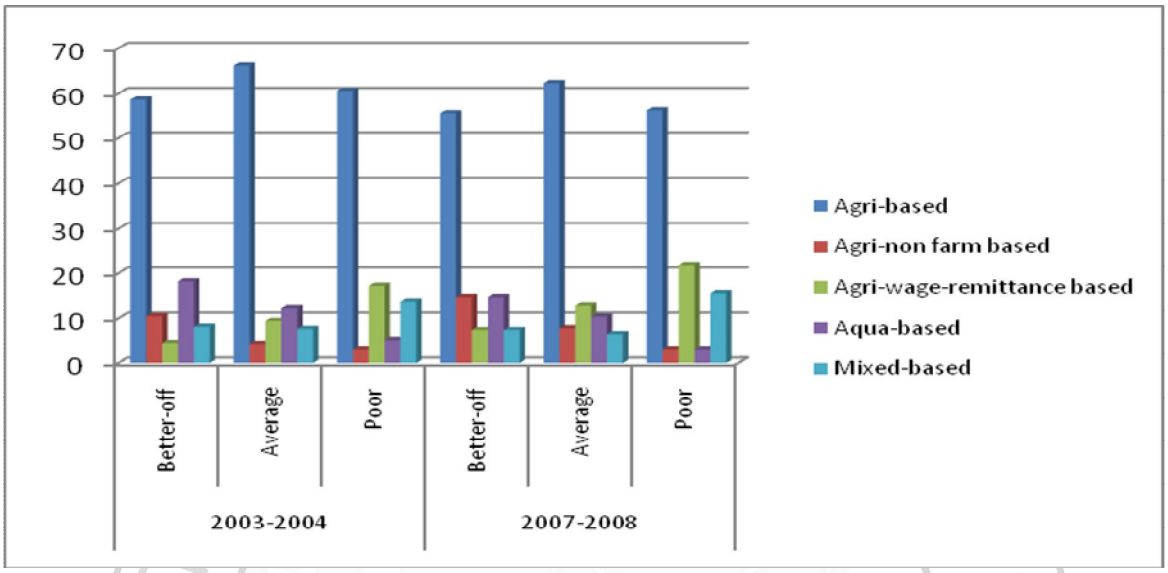


Figure 1 . Graphic representation of the typology of livelihood strategies among the three wealth categories of households , over 2003-2008 period (% of surveyed households)

Different livelihood strategy among the study sites

Figure 2. presents the main typology of livelihood strategies identified in the seven communes of the study sites. It is interesting that with the identified strategies, there is very difference in strategies from site to site. The agriculture - based strategy is mainly adopted in Phong Hoa, Quang Thai, Quang Loi and Phu Luong Communes. Phu Luong is more reliant on crop (mainly rice) production with 90 % of the surveyed households whose crop income contributes over 50 % to their total income. The main reason to explain this finding is due to the significant difference in land allocation between study sites. More land is available for agricultural activities in Phong Hoa and Phu Luong than in Vinh Phu, Vinh Xuan and Vinh Hung Communes.

The aquaculture - based strategy is opted for by households in Vinh Hung and Vinh Xuan. Agriculture-wage-remittance - based strategy plays a more important role for households in Vinh Phu and Vinh Xuan Communes. Similarly, households in these communes opted more favorably for the mixed - based livelihood.

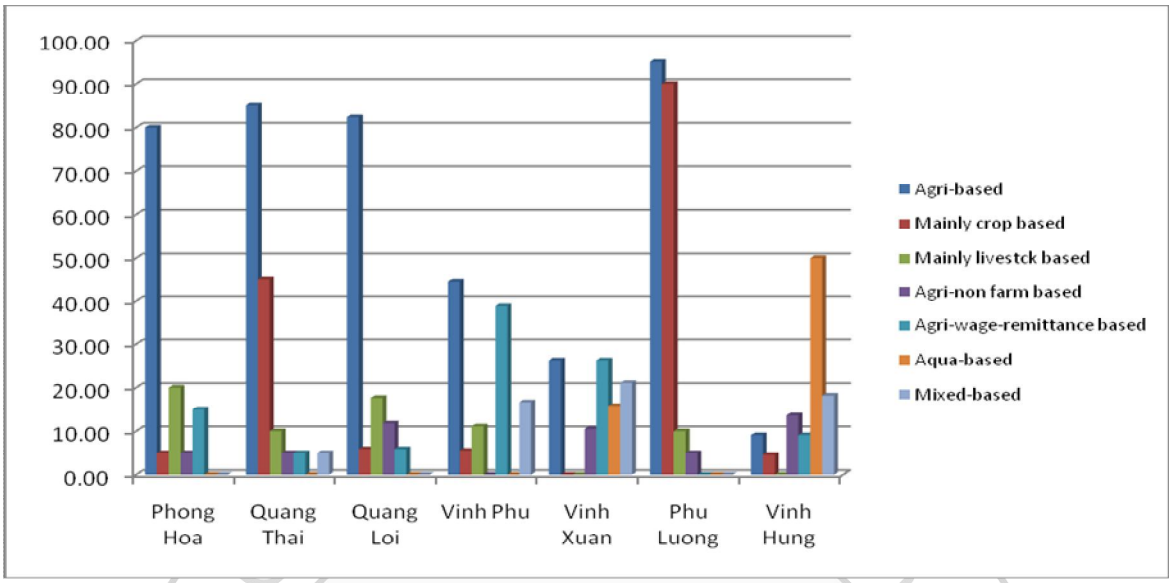


Figure 2 . Graphic representation of the household strategies opted for in the seven communes of the 2007-2008 survey (% of surveyed households)

3.2 Household income

Among the three wealth categories of households

Figure 3 presents the total annual household income of the three wealth categories of households. There is a significant difference in household income between the household categories in the Coastal Sandy Zone. The total income of the better-off households is considerably higher than the income of the average and the poor categories.

Apart from income size, there is a considerable difference in the structure of income sources among household (Figures 4.). Clearly, agriculture (crop and livestock) is still the most important for the better-off households because their income constitutes the largest share (49 %) of the total household income. Crop is likely to play the most important role in income contribution to total household income, but livestock is an increasingly important activity for all three wealth categories. Although there is a considerable difference in the income contributed by livestock among the three wealth categories, its share in the total income is not really significantly different.

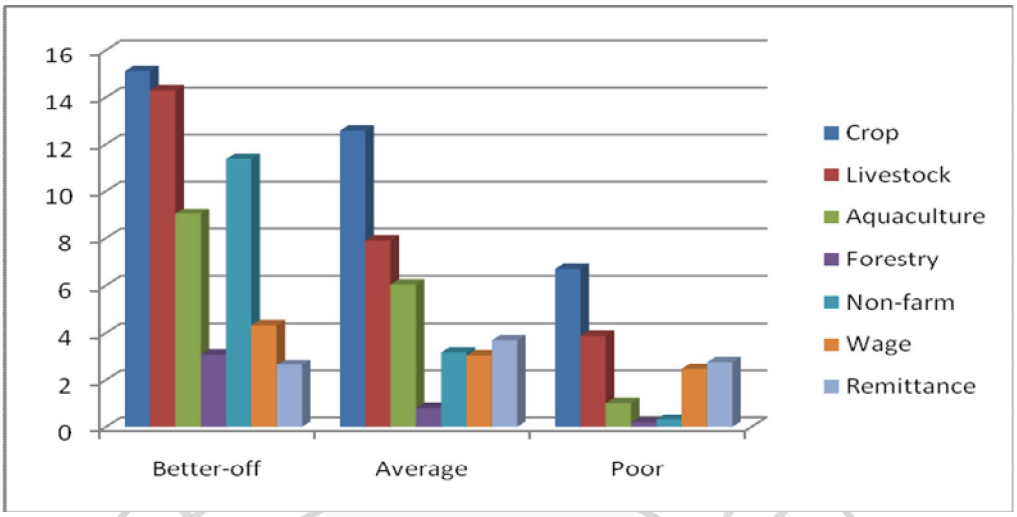


Figure 3. Graphic representation of the total annual household income and component of income among the three wealth categories of households, over 2007-2008 period (10^6 VND)

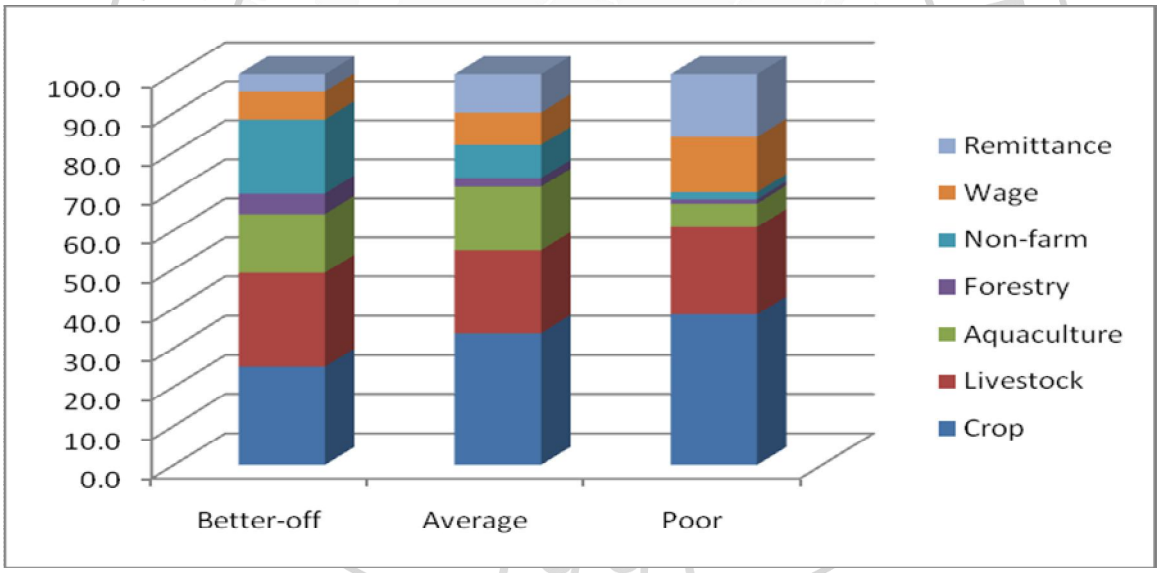


Figure 4. Components of the households' income of the households categories in 2007-2008 (%)

The share of crop generated income in the total household income is significantly different among the three wealth categories. This implies that crop is likely to be more important to the poor than to the better-off and the average households categories. It is also an outcome of their

livelihood strategy mainly based on crop production (and giving the highest priority to food security at household level) as analyzed in the previous section.

Looking at sub-sectors, rice and pig are the most important contributors in crop and livestock. Aquaculture is likely to be more important for the average and the better-off households categories than for the poor. This difference is clearly explained by the fact that the poor do not have enough capital to invest in aquaculture, shrimp raising activities in particular which are considered as a higher return driver but it is very risky and it needs more investment and high techniques. All of these factors are likely to be unsuitable for the poor.

It is also worth noting that non-farm activities generate more income for the better-off household, accounting for 19 % of the total household income. Information from group discussion and household survey indicates that in recent years, the better-off have been operating many non-farm activities such as rice milling, food processing, input and output trade, and providing services such as land preparation, harvesting, transportation.

By contrast, the contribution of wage labor and remittance in particular to the total income is more important to the poor and the average households categories than to the better-off. It is also worth noting that remittance and transfer is crucial for the poor and the average because of its important contribution to the total household income, accounting for 16 % and about 10 %, respectively.

Among the study sites

There are considerable differences in the structure of the income in the study sites. Figure 5 reports that, on average, the annual household incomes in Phu Luong and Phong Hoa Communes are the highest. This finding shows that although all study sites are located in the same zone, the household income varies significantly from site to site. This could be mainly explained by the differences in the livelihood assets, particularly in the access to land and the respective livelihood strategies opted for by the households.

Looking at the structure of household income, significant differences are also found between the seven communes of the surveys. In many agriculture - based communes such as Phong Hoa, Phu Luong, Quang Thai and Quang Loi, household income is largely contributed by agricultural

activities. For example, agriculture generates about 80 % of the total household income in Phu Luong, 63 % in Phong Hoa, 60 % in Quang Thai, and 59 % in Quang Loi (Figure 6.).

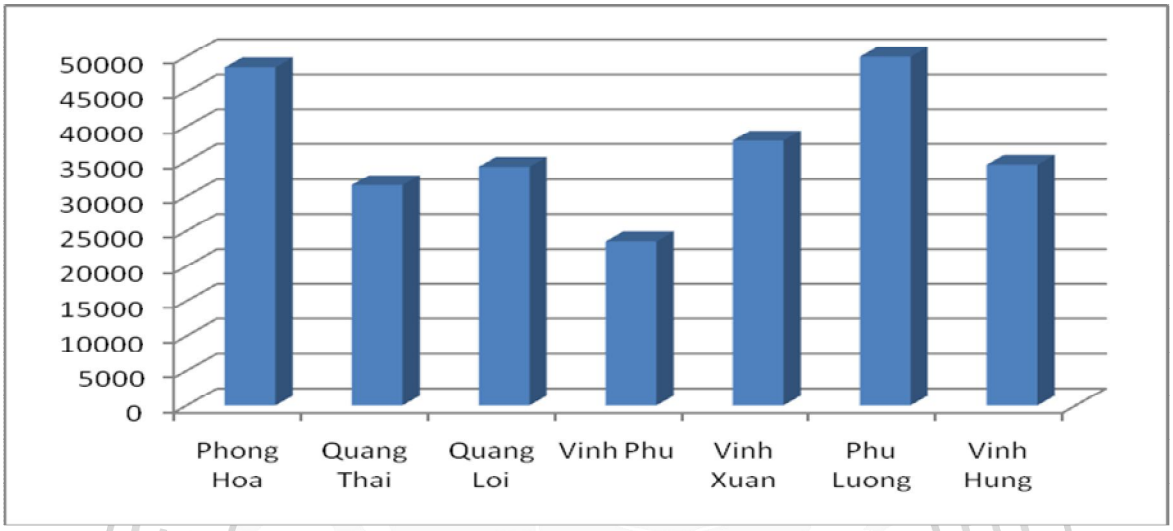


Figure 5. Graphic representation of the annual household income in the seven communes of the survey, over 2007-2008 period (1,000 VND)

It is likely that rice is more important for some sites than others. For example, the share of household income from rice represents about 60 % of the total household income in Phu Luong. The main reason is that Phu Luong has more favorable conditions for rice farming, such as relatively abundant land for rice crops, better land quality, better irrigation systems. Especially, rice increasingly makes significant contribution to household income since both rice yield and rice price have been significantly increased in recent years. Similarly, rice income is also relatively important to Quang Thai since it contributes about 20 % to the total household income. In Phong Hoa, cassava, peanuts and to a lesser extent sweet potatoes generate important income for households. In Quang Thai, Quang Loi peanuts, tobacco contribute significant part to total household income. Many farmers in Quang Thai said that they gain high income from tobacco, but its price is unstable. Meanwhile, vegetables are likely more important to Vinh Phu and certainly to Vinh Xuan where various types of vegetables such as melons, cuccumber, chilli, etc. generate important income for farmers.

Figure 6 presents the fact that in some study sites where households have opted for the agriculture – based strategy, livestock is also an important activity as it contributes a considerable share to the total household income. Pigs are likely to be the most important one in terms of income generation to farmers. In all study sites, pig income accounts for the biggest part of the livestock income.

Aquaculture is also contributing to the household's income. Information from group discussion and household survey indicates that about half of households run fish ponds in Phong Hoa Commune with an area of approximately 0.1 ha per pond. All better-off households have fish ponds with an area ranging from 0.2 ha to 0.85 ha. In terms of income contribution, pond fish accounts on average for 8 % to 10 % of total income in each household category.

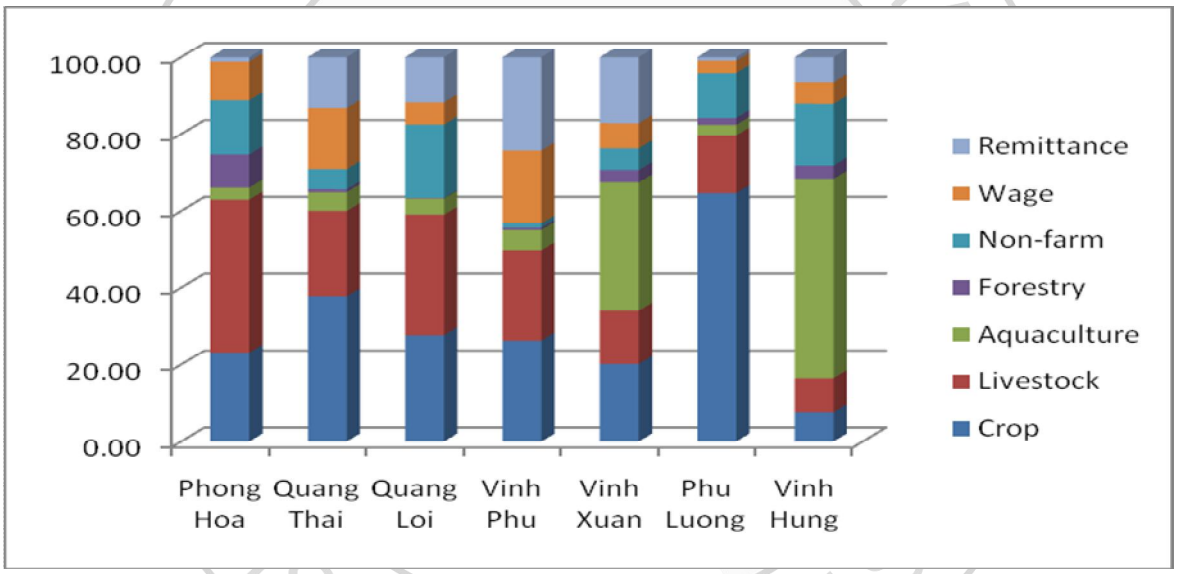


Figure 6. Structure of household income in seven communes of the survey, over 2007-2008 period

For Vinh Hung and Vinh Xuan where the interviewed households mainly rely on the aquaculture-based strategy. Figure 6 shows that aquaculture generates the highest income for the households in these communes. For Vinh Phu where farmers mainly opt for a mixed – based strategy, various sources contribute to the total household income. Apart from agriculture income which generates about 50 % of the total household income, non-farm, wage and remittance in particular contribute a significant part. As analyzed in the previous chapter, due to poor natural

endowment resources, land in particular, most interviewed households consider migration and wage work as a valuable way to earn their living.

3.3 Evolution of the household income

Income is one of the important indicators reflecting the outcome of livelihood strategy. The total household income has increased between the 2003-2004 and 2007-2008 periods. On average, the total household income increased from 14.91 million VND in 2003-3004 to 37.08 million VND in 2007-2008 (expressed in the current market price). This shows that the standard of living of the households in the Coastal Sandy Zone has significantly improved.

However, changes in the household income do differ between the three wealth categories of household. Generally, the better-off households have quickly improved their livelihood since their income has been steadily increasing. The total income of the better-off households increased by 39.55 million VND over the 2003-2008 period. During the same period, the total income of the poor households increased of 10.36 million VND. As a result, the gap of income between the household categories is wider over time since the Gini coefficient increased from 0.30 in 2003-2004 to 0.34 in 2007-2008.

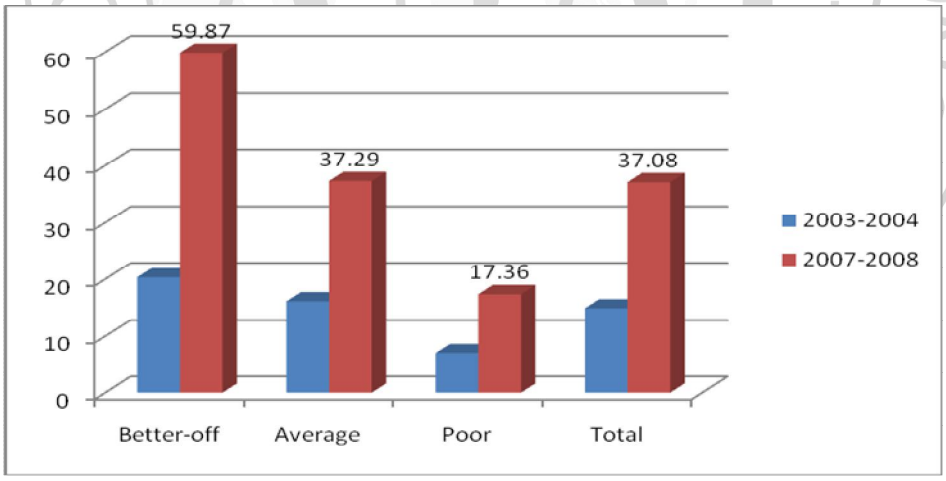


Figure 7. Graphic representation of the household income among the three wealth categories of households, over 2003-2008 period (million VND)

3.4 Influence of the livelihood assets and livelihood strategies on the household income

Given the significant improvement of household income over the last five years, an obvious relevant issue is the identification of the main factors behind this improvement. In this study, annual per capita household income was hypothesized to depend on the household's livelihood strategy and asset portfolio and a semi-log regression model was used to measure. A definition of the model was as follows:

$$Log(API) = f(FS, RD, HE, SK, MA, TA, LS_1, LS_2, LS3, LS_4)$$

Where: API = annual capital household income (VND million)

FS = Family size (number of person)

RD = Dependency ratio (number of people out working age/number of people at working age)

HE = education of household head (median years of schooling)

LS = farm size (number of "sao"; 1 "sao"= 500m^2)

SK = Size of capital (VND million)

MA = Market access (easy access = 1; difficult access = 0)

TA = Training access (easy access = 1; difficult access = 0)

LS_1 = Livelihood strategy 1 (more diversification toward non-farm activities)

LS_2 = Livelihood strategy 2 (combining agriculture, hired labor, and migration)

LS_3 = Livelihood strategy 2 (mainly depend on agriculture)

LS_4 = Livelihood strategy 2 (mainly depend on aquaculture)

The model results presented that annual capita household income was strongly depended on both livelihood assets and livelihood strategies adapted by the households. In terms of livelihood assets, family size was not statistically significant for explaining the lower annual capita income. But, dependency ratio has a statistically insignificant association with lower annual capita income. If dependency ratio increased by one unit, annual capita income decreased by 20.2%. The reasons were attributed that in the coastal area the family size was not significantly different between the household categories, but dependency ratio was considerably different. The poor households were likely to have more children at schooling age and more elderly compared with the better-off households. Besides, the education level of the household head was an important

determinant affecting the household income. One higher grade of the household head education was contributed to 6.2% of annual capital income. A survey data indicates that in the study sites, the average years of schooling for the household head were 6.56 years in 2007-2008. But there was a significant difference in the literacy of the household heads among the household categories. Generally, the literacy of the poor household heads was relatively lower than that of the better-off and the average categories. Until now about 9 % of household heads of the poor are illiterate; 41 % completed primary level.

Farm size was not statistically insignificant association with annual capital income, suggesting that bigger farm size alone did not guarantee higher income. However, in practice farm size indirectly affects household income through its effect on livelihood strategies adapted by the households. A bigger farm size was likely associated with the higher possibility of a household following a agriculture-based strategy. Regarding financial capital, there was a significant positive association with higher income. The model results suggested that an additional one million VND owned by the households contributed to 2.07% of additional annual income per capita.

Interestingly, access to trainings and access to market had a statistically significant association with higher annual income per capita. It implicated that the better access to both market and trainings had positive impacts on household income. In the last five years, more people in the interviewed households have increasingly participated into the various types of skill trainings. These trainings were highly appreciated and accepted by the local people. Many households in the study sites said that they were very interested in the short trainings which were much useful for them to apply in their production. Besides, improvement of local infrastructure such as roads, markets, information also played an important role.

The results showed that households who follow a livelihood strategy (diversification toward non-farm activities) earn significantly higher incomes compared with other strategies (Table 1). While there is statistically significant evidence that the households who followed the livelihood strategy 2 (dependent on agriculture, hired labor and migration), livelihood strategy 3 (strongly dependent on agriculture) and livelihood strategy 4 (strongly dependent on aquaculture) earn lower incomes.

Table 1. Determinants of log annual capita household income

Explanatory variable	Coefficient	Standard error	T test
Constant	3.979	.192	20.745
Family size	-.026	.012	-1.265
Dependency ratio	-.202**	.034	-2.061
Education of household head	.062***	.016	3.946
Farm size	.001	.001	.855
Capital size	.020**	.001	2.466
Access to market	.324*	.171	1.899
Access to trainings	.268**	.107	2.502
Livelihood strategy 1	.261***	.152	6.762
Livelihood strategy 2	-.273***	.165	-3.779
Livelihood strategy 3	-.134***	.160	-3.097
Livelihood strategy 4	-.201***	.128	-3.163
Number of observation	138		
R^2 adj	0.66		

3. Conclusions and policy implications

The household livelihood strategies opted for by households in the coastal sandy area are assessed by combining the qualitative information from participatory assessment and the quantitative information from household surveys. Generally, households strongly rely on agriculture for their livelihood. The level of reliance on agriculture is very different from site to site and among the three wealth categories of households. In some study sites such as Phong Hoa, Quang Thai, Quang Loi and Phu Luong the surveyed households are more dependent on agriculture for their income, but households in Vinh Hung highly rely on aquaculture. In other study sites such as Vinh Phu and Vinh Xuan, households are likely associated with various strategies. Some of them rely on agriculture and aquaculture but others are more dependent on wage and remittance. The significant difference between these household groups is also found. Although agriculture - based is the most important for most of the households in the seven communes of the surveys, the better-off household category is more likely reliant on non-farm,

livestock and aquaculture; by contrast, crop, wage and remittance are more important for the poor household category.

There are significant differences between the household not only in the size of income but also in its structure. Apart from agriculture income (crop and livestock), aquaculture, non-farm is increasingly essential to the better-off households. Meanwhile, agriculture, wage work and remittance are likely to be more crucial for the average and the poor categories of households. These findings implicate that rural development policies, especially policies aiming at rural growth and poverty reduction could direct to capacity building and access improvement. In the case of coastal sandy area, in recent years, there are some policies to support crop, livestock and aquaculture production such as land allocation for aquaculture, subsidy for new crop seeding and new animal breeding, land allocation to establish farm on a large scale. It is clear that these policies have mainly benefitted the better-off households, because of their better capacities measured by the available level of tangible livelihood assets (land, labor, capital, machines and equipment) and intangible assets (knowledge, skills, accessible ability). Meanwhile, there is a lack of policies to raise the capacity and access improvement for the poor households. There is a necessity to introduce policy to market infrastructure development and to further provide training courses and credit on doing new business activities from which the poor could benefit thanks to these policies.

REFERENCES

Ashley, C & Carney, D. (1999). Sustainable Livelihoods: Lessons from early experience DFID.

Carswell, G. (1997). Agricultural Intensification and Rural Sustainable Livelihoods: A "Think Piece", *IDS Working paper*, No.64.

Chambers, R. Conway, G. (1992). Sustainable Rural Livelihoods: Practical Concepts for the 21st Century. IDS DP296 Feb 1992.

Davies, S. (1996), *Adaptable Livelihoods*: Coping with Food Insecurity in the Malian Sahel, London: Macmillan Press.

Dercon, S. and P.Krishnan. (1996). "Income Portfolios in rural Ethiopia and Tanzania: choices and constraints", *Journal of Development Studies*, 32, 6, p. 850-875.

DFID (2000a). Sustainable Livelihoods Guidance Sheets http://www.livelihoods.org

Ellis, F. (1998) 'Household strategies and rural livelihood diversification'. *Journal of Development Studies*. Vol.35, No.1, pp.1–38.

Ellis, F. (2000) *Rural livelihoods and diversity in developing countries*. Oxford: OUP

Hussein, K. and J. Nelson. (1998). 'Sustainable Livelihood and Livelihood Diversification', *IDS Working Paper*, No. 69.

Phong Dien Statistical Section (2008). *Statistical Yearbook 2007*.

Phu Loc Statistical Section (2008). *Statistical Yearbook 2007*.

Phu Vang Statistical Section (2008). *Statistical Yearbook 2007*.

Project PIC/SUD (2005). *Report on the survey of the socio-economic situation and farming system in the housheolds in the coastal sandy region of Thua Thien Hue province*. FUSAGX; UCL; NISF, HUAF.

Quang Dien Statistical Section (2007). *Statistical Yearbook 2006*.

Scoones, I. (1998) 'Sustainable rural livelihoods: A framework for analysis'. *IDS Working Paper No.72*. Brighton: IDS.

Thua Thien Hue Statistical Office (2006). *Statistical Yearbook 2007*.

Thua Thien Hue Statistical Office (2007). *Statistical Yearbook 2008*.

Thua Thien Hue Statistical Office (2008). *Statistical Yearbook 2009*.